Majority Opinion >

UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF NEW YORK

GHALY DEVICES LLC, Plaintiff, -against- HUMOR RAINBOW, INC., Defendant.

1:19-cv-2318-GHW

March 6, 2020, Filed March 6, 2020, Decided

For Ghaly Devices LLC, Plaintiff: Steven G Hill, LEAD ATTORNEY, Hill Kertscher & Wharton, LLP (GA), Atlanta, GA; Roberto Legaspi Gomez, Joshua Seth Broitman, Ostrager, Chong, Flaherty & Broitman, P.C., New York, NY.

For Humor Rainbow, Inc., Defendant: Robert Greeson, LEAD ATTORNEY, Norton Rose Fulbright US LLP (Dallas), Dallas, TX; Erik Owen Janitens, Norton Rose Fulbright US LLP, Houston, TX; Michelle Erica Wang, Norton Rose Fulbright US LLP, New York, NY.

GREGORY H. WOODS, United States District Judge.

GREGORY H. WOODS

MEMORANDUM OPINION AND ORDER

GREGORY H. WOODS, District Judge:

Matchmaking is a timeless art. Nowadays, as with most everything else, there is an app for that. This case is about just such an app. Plaintiff Ghaly Devices, LLC alleges that the mobile application created by OkCupid—a popular dating website owned by Defendant Humor Rainbow, Inc.—infringes claim 42 ("Claim 42") of United States Patent Number 6 , 685 , 479 (the "479 Patent"). Claim 42 recites a device that requires a user to answer a series of questions, uses an algorithm to apply a personality profile

system—such as the Myers-Briggs Type Indicator—to the user's answers, matches this data with data corresponding to another user of a similar device, and calculates a degree of compatibility between the two users. Ghaly alleges that Humor's employees have infringed Claim 42 by using the OkCupid mobile application on a smartphone. Because the 479 Patent is directed to the abstract idea of a matchmaking algorithm and does not involve the application of an inventive concept, Humor's motion to dismiss is GRANTED.

I. BACKGROUND

A. Facts 1

1. The 479 Patent

Ghaly Devices, LLC ("Ghaly") owns the "479 Patent." FAC ¶ 2. Ghaly alleges that Humor Rainbow, Inc. ("Humor") has infringed Claim 42 of that patent. Claim 42 states:

> 42. A device for determining a degree of compatibility between a first set of data corresponding to a first person and a second set of data corresponding to a second person comprising:
>
> a. a housing;
>
> b. a plurality of entry control mechanisms to operate the device,
>
> c. computer memory to store user's data,
>
> d. means to communicate data to and from another device,
>
> e. a microprocessor to control the operation of the device,
>
> f. a control program to produce user's personality attributes, or behavioral pattern parameters, using a personality profile system to process stored user's data, and to match stored and processed data with data corresponding to a second user and received from another device, and to calculate a degree of compatibility between the two users, based in part on the number of common items between desired and calculated attributes or parameters, and

g. a liquid crystal display, or light emitting diodes display, to indicate said degree of compatibility between the two users.

479 Patent, Ex. A to FAC, Dkt No. 43-1, at 22.

2. The Device and the OKCupid Mobile Application

Humor provides online dating services under the brand "OKCupid," including the OKCupid mobile application. [*2] FAC ¶ 4; Ex. J to FAC, Dkt No. 43-10. The OKCupid mobile application collects answers to questions from its users that are designed to determine if the users are compatible. FAC ¶¶ 68-70. The FAC alleges that "[o]n information and belief, Humor . . . installed the OKCupid mobile application on a device [the "Device"] for the purpose of developing, designing, testing, evaluating, debugging, qualifying, demonstrating, or preparing educational materials for the OKCupid mobile application." *Id.* ¶ 44.

The FAC alleges that Humor infringed Claim 42 by installing the OkCupid mobile application on the Device. *Id.* ¶¶ 54-75. Ghaly pleads that the Device is a mobile device, like an iPhone or other smartphone, so it has a housing. *Id.* ¶ 56; *see* Claim 42, subsection a. In addition, the Device includes several entry control mechanisms to operate the Device including a "power button, volume button, [and] touch points on a touch screen." FAC ¶¶ 57-59; *see* Claim 42, subsection b. Because it executes on the Device and the Device, like all smartphones, includes computer memory, the OKCupid mobile application "executes on a device that includes computer memory" to store users' data. FAC ¶¶ 60-61; *see* Claim 42, subsection c. Similarly, the Device includes a microprocessor to control its operation because the "OKCupid mobile application can only run if the device has a microprocessor to execute the OKCupid mobile application." FAC ¶¶ 65-66; *see* Claim 42, subsection e. And the Device includes a liquid crystal display (LCD) or light emitting diodes display (LEDD) to provide visual depiction of data to a user. FAC ¶¶ 73-74; *see* Claim 42, subsection g.

The "OKCupid mobile application is also designed to use the [D]evice's network capabilities to communicate with another device, such as another mobile device, via the OKCupid server application." FAC ¶ 64; *see* Claim 42, subsection d. Finally, the "OkCupid mobile application uses a personality profile system to process such stored user's data and determine, based on data associated with a second user, a degree of compatibility between such two users." FAC ¶ 72; *see* Ex. K to FAC, Dkt No. 43-11; Claim 42, subsection e.2 Consequently, Ghaly alleges that the Device infringes every claim limitation in Claim 42.

B. Procedural History

Ghaly Devices filed the complaint that initiated this case on March 14, 2019. Dkt No. 1. Humor filed a motion to dismiss June 28, 2019. Dkt No. 38. In response, Ghaly filed the FAC on July 19, 2019. In the FAC, Ghaly asserts claims for direct patent infringement, FAC ¶¶ 40-90, and indirect patent infringement, FAC ¶¶ 91-104. Humor filed this motion to dismiss the FAC on August 9, 2019. Dkt Nos. 45-46. Ghaly subsequently filed its opposition, Dkt No. 48, and Humor filed its reply, Dkt No. 49.

II. LEGAL STANDARD

A complaint must contain "a short and plain statement of the claim showing that the pleader is entitled to relief." Fed. R. Civ. P. 8(a)(2) . However, a defendant may move to dismiss a plaintiff's complaint for "failure to state a claim upon which relief can be granted." Fed. R. Civ. P. 12(b)(6) . In deciding a motion to dismiss under Rule 12(b)(6) , the court accepts as true all well-pleaded factual allegations and draws all inferences in the plaintiff's [*3] favor. *See Palin v. N.Y. Times Co.*, 933 F.3d 160 , 165 (2d Cir. 2019) (quoting *Elias v. Rolling Stone LLC*, 872 F.3d 97 , 104 (2d Cir. 2017)); *Chase Grp. Alliance LLC v. City of N.Y. Dep't of Fin.*, 620 F.3d 146 , 150 (2d Cir. 2010). To survive a motion to dismiss pursuant to Rule 12(b)(6) , a complaint "must contain sufficient factual matter, accepted as true, to 'state a claim to relief that is plausible on its face.'" *Iqbal*, 556 U.S. at 678 (quoting *Bell Atl. Corp. v. Twombly*, 550 U.S. 544 , 570 , 127 S. Ct. 1955 , 167 L. Ed. 2d 929 (2007)). A claim is facially plausible when a plaintiff "pleads factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged." *Id.* (citing *Twombly*, 550 U.S. at 556).

"To survive dismissal, the plaintiff must provide the grounds upon which his claim rests through factual allegations sufficient 'to raise a right to relief above the speculative level.'" *ATSI Commc'ns, Inc. v. Shaar Fund, Ltd.*, 493 F.3d 87 , 98 (2d Cir. 2007) (quoting *Twombly*, 550 U.S. at 555). Although Rule 8 "does not

require 'detailed factual allegations,' . . . it demands more than an unadorned, the-defendant-unlawfully-harmed-me accusation." *Iqbal*, 556 U.S. at 678 (quotation omitted). "A pleading that offers 'labels and conclusions' or 'a formulaic recitation of the elements of a cause of action will not do.'" *Id.* (quoting *Twombly*, 550 U.S. at 555). Determining whether a complaint states a plausible claim is a "context-specific task that requires the reviewing court to draw on its judicial experience and common sense." *Id.* at 679 .

In determining the adequacy of a claim under Rule 12(b)(6) , a court is generally limited to "facts stated on the face of the complaint." *Goel v. Bunge, Ltd.*, 820 F.3d 554 , 559 (2d Cir. 2016) (quotation omitted). However, "extrinsic documents may be considered as part of the pleadings if they either are (1) attached to the complaint; (2) incorporated into the complaint by reference; or (3) integral to the complaint." *DeLuca v. Access IT Grp., Inc.*, 695 F. Supp. 2d 54 , 60 (S.D.N.Y. 2010). The Court has considered the exhibits attached to the FAC in deciding this motion.

III. DISCUSSION

A. Section 101

1. Legal Standard

Under section 101 of the Patent Act ("Section 101 "), "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101 . Although the language of Section 101 is sweeping, the Supreme Court "ha[s] long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable." *Alice Corp. v. CLS Bank Int' l*, 573 U.S. 208 , 216 , 134 S. Ct. 2347 , 189 L. Ed. 2d 296 (2014) (quotation omitted). "This 'exclusionary principle' promotes innovation by not granting monopoly power over the universal concepts that provide the building blocks of ingenuity." *iSentium, LLC v. Bloomberg Fin. L.P.*, 343 F. Supp. 3d 379 , 387 (S.D.N.Y. 2018) (quoting *Alice*, 573 U.S. at 216). At the same time, "too broad an interpretation of this exclusionary principle could eviscerate patent law. For all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566

U.S. 66 , 71 , 132 S. Ct. 1289 , 182 L. Ed. 2d 321 (2012). Thus, an invention that embodies a law of nature or an abstract idea may be eligible for patent protection if it is applied to "a new and useful end." *Id. at 72* [*4] (quoting *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127 , 130 , 68 S. Ct. 440 , 92 L. Ed. 588 , 1948 Dec. Comm'r Pat. 671 (1948)).

"Whether a claim is drawn to patent-eligible subject matter under § 101 is a threshold inquiry." *Quantum Stream Inc. v. Charter Commc' ns, Inc.*, 309 F. Supp. 3d 171 , 181 (S.D.N.Y. 2018) (quoting *In re Bilski*, 545 F.3d 943 , 950 (Fed. Cir. 2008) (brackets omitted)). When a claim is drawn to a patent-ineligible subject matter, it "must be rejected even if it meets all of the other legal requirements of patentability." *Bilski*, 545 F.3d at 950 . "Whether a claim is drawn to patent-eligible subject matter presents a pure question of law." *Quantum Stream Inc.*, 309 F. Supp. 3d at 181 (quotation omitted); *see also Bilski*, 545 F.3d at 951 (determination of a patent's validity under § 101 is an "issue of law").

"To guide the § 101 inquiry into whether a patent is drawn from patent-eligible subject matter, the Supreme Court has established a two-step framework, sometimes referred to as the *Mayo/Alice* inquiry." *Quantum Stream Inc.*, 309 F. Supp. 3d at 182 . First, a reviewing court must determine whether the claims at issue are "directed to" a patent-ineligible idea that is anchored in an abstract idea or natural phenomenon. *Alice*, 573 U.S. at 217 . If so, courts then "consider the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Id.* (quoting *Mayo*, 566 U.S. at 78-79).

The "'directed to' inquiry" at step one "applies a stage-one filter to claims, considered in light of the specification, based on whether their character as a whole is directed to excluded subject matter." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 , 1335 (Fed. Cir. 2016) (quotation omitted). "Relevant to the first step inquiry, 'an abstract idea does not become non-abstract by limiting the invention to a particular field of use or technological environment, such as the Internet.'" *Quantum Stream Inc.*, 309 F. Supp. 3d at 182 (quoting *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363 , 1366 (Fed. Cir. 2015));

see also iSentium, 343 F. Supp. 3d at 387 ("At step one of *Alice*, the Supreme Court has declined 'to delimit the precise contours of the "abstract ideas" category,' although it has identified common business concepts like risk hedging and intermediate settlements involving a clearinghouse as 'fundamental' business practices that are abstract ideas, and thus ineligible for patent protection.") (quoting *Alice*, 573 U.S. at 221). "In addition, courts have often held processes that can be accomplished mentally or within the human mind as drawing upon abstract ideas. That is because the 'application of only human intelligence to the solution of practical problems is no more than a claim to a fundamental principle.'" *Quantum Stream Inc.*, 309 F. Supp. 3d at 183 (quoting *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366 , 1371-72 (Fed. Cir. 2011)).

If a court concludes that a claim is directed to an abstract idea, it proceeds to the second step of deciding whether the claim's elements include an "inventive concept sufficient to transform the abstract idea into a patent-eligible application." *Alice*, 573 U.S. at 221 (quotation omitted). A claim will fail at this step unless it "go[es] beyond 'well-understood, routine, conventional activities'" in the industry. *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 , 1348 (Fed. Cir. 2016) (quoting *Alice*, 573 U.S. at 225) (brackets omitted).

"This analysis looks [*5] to whether a claimed invention includes 'additional features' that render it as something 'more than a drafting effort' intended to monopolize an abstract idea." *iSentium*, 343 F. Supp. 3d at 387 (quoting *Alice*, 573 U.S. at 221). "These features must be more than conventional steps articulated at a high level of generality, and 'the introduction of a computer into the claims does not alter the analysis.'" *Id.* at 387-388 (quoting *Alice*, 573 U.S. at 222) (alterations omitted). In other words, "the use of a computer to implement an abstract idea does not, in itself, create a patentable application." *Id.* at 388 (citing *Alice*, 573 U.S. at 221-22). As the Supreme Court wrote in *Alice*, "[s]tating an abstract idea while adding the words 'apply it with a computer' simply combines those two steps, with the same deficient result. Thus, if a patent's recitation of a computer amounts to a mere instruction to implement an abstract idea on a computer, that addition cannot impart patent eligibility." *Id.* at 223 (quotation and alterations

omitted).

"An inventive concept is unlikely to exist when the processes or calculations claimed in a patent could be accomplished within the human mind or through mental processes, or by 'using [a] pencil and paper,' or even when assisted with a simple device or accomplished in real time with variable inputs being affected." *Quantum Stream Inc.*, 309 F. Supp. 3d at 183 (quoting *Intellectual Ventures*, 792 F.3d at 1368-69). Likewise, "[t]o salvage an otherwise patent-ineligible process, a computer must be integral to the claimed invention, facilitating the process in a way that a person making calculations and computations could not." *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Canada (U.S.)*, 687 F.3d 1266 , 1278 (Fed. Cir. 2012)).

"When a defendant challenges patent eligibility through a Rule 12(b)(6) motion, courts must apply the well-settled Rule 12(b)(6) standard which is consistently applied in every area of law." *iSentium*, 343 F. Supp. 3d at 383 (quotation omitted). Consequently, where a complaint "raise[s] factual disputes underlying the § 101 analysis," the complaint should not be dismissed at the pleading stage. *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121 , 1126 (Fed. Cir. 2018). However, "not every § 101 determination contains genuine disputes over the underlying facts material to the § 101 inquiry.". *Berkheimer v. HP Inc.*, 881 F.3d 1360 , 1368 (Fed. Cir. 2018). Accordingly, "[p]atent eligibility can be determined at the Rule 12(b)(6) stage 'when there are no factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law.'" *Voter Verified, Inc. v. Election Sys. & Software LLC*, 887 F.3d 1376 , 1384 (Fed. Cir. 2018) (quoting *Aatrix*, 882 F.3d at 1125).

2. Application

a. *Alice* Step One: Abstract Idea

Claim 42 is directed to an abstract idea because it is drawn to the abstract ideas of human compatibility and matchmaking. To evaluate Claim 42 under step one of *Alice*, the Court must "distill[] [the] claim[] to its basic concepts to determine whether [it is] directed to abstract ideas." *Jedi Techs., Inc. v. Spark Networks, Inc.*, No. CV 1:16-1055-GMS, [2017 BL 271377], 2017 U.S. Dist. LEXIS 122313 , [2017 BL 271377], 2017 WL 3315279 , at *8 (D. Del. Aug. 3, 2017). At their most basic level, Patent 479 generally and Claim 42 specifically are directed to a process for

matchmaking. However, "[t]he concept of matchmaking is certainly not novel and has been performed by humans for a very long time." *Jedi Techs.*, [2017 BL 271377], 2017 U.S. Dist. LEXIS 122313 , [2017 BL 271377], 2017 WL 3315279 , at *7; *see, e.g. [*6]* , Joseph Stein, *Fiddler on the Roof* (1964); *Genesis* 24 (King James). The specification for the 479 Patent itself acknowledges that "[f]or the longest and in every days [sic] life[,] individuals have been interacting with each other [and] forming personal relationships with other individuals based on preferences, mutual interests, personality traits, and the like." 479 Patent at 16.3

Limitation f recites a "control program" that matches people based on information they have entered. The specification for the 479 Patent explains that "[a]n algorithm will check for a match in the desired characteristics specified by the two players." 479 Patent at 20 ; *see also id.* at 19 ("The processing of data consists of identifying the behavioral pattern and personal profile of the player. This is done based on algorithms[.]"). Hence, limitation f seems to contemplate an algorithm for matchmaking. Because courts "have treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category," *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350 , 1354 (Fed. Cir. 2016), limitation f does not bring Claim 42 outside the abstract idea category. *See SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161 , 1167 (Fed. Cir. 2018) ("We have explained that claims focused on collecting information, analyzing it, and displaying certain results of the collection and analysis are directed to an abstract idea.") (quotation omitted).

The limitations other than limitation f in Claim 42 are components of a generic computer or mobile phone such as a "housing," Claim 42, limitation a, and a "microprocessor to control the operation of the device." Claim 42, limitation e. Indeed, the FAC identifies a generic iPhone as having all the features detailed in limitations a-e and g. *See* Ex. M to FAC, Dkt No. 43-13; *see also* FAC ¶¶ 56, 59, 64, 66, 74. The recitation of such standard computer components does not save the otherwise abstract claim in this case. *See In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607 , 611 (Fed. Cir. 2016) (holding that the recitation of "concrete, tangible components such as 'a telephone unit' and a 'server . . . merely provide[d] a generic environment in which to carry out" an abstract idea); *Alice*, 573 U.S. at

226 ("[A] 'data processing system' with a 'communications controller' and 'data storage unit,' for example—is purely functional and generic. Nearly every computer will include a 'communications controller' and 'data storage unit' capable of performing the basic calculation, storage, and transmission functions required by the method claims."). At bottom, Claim 42 joins a matching algorithm with what have become standard computer components. This combination is directed to an abstract idea at step one of *Alice. See SAP Am.*, 898 F.3d at 1168 (claim abstract where "the specification makes clear that off-the-shelf computer technology is usable to carry out the analysis").

Ghaly's arguments to the contrary are unavailing. In its opposition, Ghaly characterizes Claim 42 as being directed to a "non-abstract interface to facilitate matchmaking [by] collecting specific types of data, performing unconventional processing **[*7]** of that data, and displaying the results in an improved interface." Memorandum of Law in Opposition to Motion to Dismiss ("Opp."), Dkt No. 48, at 8 It is true that Claim 42 requires that the user input data in response to questions based on a personality profile system. However, this does not make Claim 42 non-abstract.

With respect to the "unconventional processing of that data," the 479 Patent admits that its unconventional processing is a prior art process. *See* 479 Patent at 19 ("The processing of data consists of identifying the behavioral pattern and personal profile of the player. This is done based on algorithms including counting certain categories of answers, allocating weighting factors to such categories and calculating the player's score in various classifications which identify profile or behavioral patterns. An example of such profile determination is known as the DISC dimensions of behavior. *See* Personal Profile System, Copyright, 1990. Carlson Learning Company."). Limitation f of Claim 42 adds only that the patented device will have "a personality profile system to process stored user's data." Claim 42, limitation f. Thus, the language of the claim and the specification themselves do not support the argument that the processing of data contemplated in Claim 42 is "unconventional."

The argument that Claim 42 contemplates an "improved interface" is similarly unsupported. Limitation g of Claim 42 simply claims a "liquid crystal display, or light emitting diodes display to indicate said degree of

compatibility." Claim 42, limitation g. This is nothing more than a screen on a portable device, as the FAC itself confirms when it provides a generic iPhone as an example of a device containing such an interface. FAC ¶ 74. Furthermore, the specification states that "the invention can be implemented using software" that "utilize[s] a personal computing device or the like." Patent 479 at 17. Hence, the interface is not integral to the claimed invention. Separately or in the aggregate, the Court does not agree that these features are directed to a non-abstract subject matter.

In its opposition, Ghaly attempts to recharacterize Claim 42 as "directed to an improved interface that presents information in an innovative way." Opp. at 11. Ghaly relies on the portion of the specification that states that the result of its algorithm will be represented by "a color, a sound effect and/or a melody[.]" *Id.* at 20.4 While it is true that a patent that "recite[s] a specific improvement over prior systems, resulting in an improved interface for electronic devices" is non-abstract, *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356 , 1363 (Fed. Cir. 2018), Patent 479 is not directed to an improved interface. Rather, reading the claims as a whole in light of the specification, Claim 42 is directed to a matchmaking algorithm that displays its output on a computer. That the result of the algorithm may be represented with a color is neither specific enough to make Claim 42 non-abstract nor critical to the invention. Indeed, the specification states that "any other variation or modification to the display [*8] is within the scope and intent of the invention." Patent 479 at 19. This underscores that Patent 479 is not directed to a specifically improved interface but rather to the abstract idea of a matchmaking process performed on a computer.

Match Group, LLC v. Bumble Trading Inc., No. 6:18-CV-00080-ADA (W.D. Tex. Dec. 18, 2018), cited by Ghaly, shows how its claims fall short. Ex. F to FAC, Dkt No. 43-6. In that case, the claim included, among other features, "a card-based interface characterized in part by a specific gesture, labeled in the patents as a 'swipe.'" *Id.* at 3. A card-based interface which the user navigates using a swipe is a specific improvement of a user interface, and the patent at issue in that case was directed to this specific improvement. By contrast, Claim 42 recites no such specific improvement. Instead, it recites that the output of its matchmaking algorithm must be displayed on a computer screen.

Thus, *Match Group* is distinguishable from the present case.

The analysis of similar claims in *Jedi Techs.* is also persuasive. In *Jedi Techs.*, the claims at issue included "processing" data and "using at least the compatibility criteria and stored participant-specified preferences, to calculate interpersonal compatibility." [2017 BL 271377], 2017 U.S. Dist. LEXIS 122313 , [2017 BL 271377], 2017 WL 3315279 , at *2. These claims are materially indistinguishable from the limitations in Claim 42. Ghaly attempts to distinguish *Jedi Techs.* on the ground that the claim in that case did not include "entry control mechanisms" and a "means to communicate data." Opp. at 10. But, as noted above, including these generic components of any computer-processing system in a patent does not make the patent non-abstract. The *Jedi Techs.* court's conclusion that the asserted claims in that case recited the abstract idea of "matching people based on criteria such as personality traits or location" is equally applicable in this case. [2017 BL 271377], 2017 U.S. Dist. LEXIS 122313 , [2017 BL 271377], 2017 WL 3315279 , at *7; *see also* [2017 BL 271377], 2017 U.S. Dist. LEXIS 122313 , [WL] at *8 ("Nothing in the patent specification or claim limitations significantly alters the basic concept of matching based on certain criteria.").

Ghaly's argument that Claim 42 contemplates the calculation of a degree of compatibility rather than a "binary recommendation[]" likewise falls short. Opp. at 12. Ghaly argues that "contrary to Humor Rainbow's contention, people do not perform mental steps to calculate such a 'degree,' which is a quantification based on 'desired and calculated attributes or parameters.' Rather, people use their subjective feelings and experience to make binary recommendations." *Id.* But this argument is belied by experience and common sense—it is simply not true that human beings evaluate the likelihood that a relationship will work out in only binary terms (the relationship will work out, or it will not). People frequently evaluate the degree of compatibility of two people (the relationship might work out). Because this argument rests on the premise that humans are capable of only "binary matchmaking," it is unpersuasive. *Id.*

In sum, the essence of Claim 42 is directed to the abstract concept of matchmaking. That Claim 42

proposes that this process should be performed on a computer is not sufficient to make it **[*9]** non-abstract. *Cf. Jedi Techs.*, [2017 BL 271377], 2017 U.S. Dist. LEXIS 122313 , [2017 BL 271377], 2017 WL 3315279 , at *8 ("Even if matchmakers traditionally have not relied on the Internet, the mere application of modern technology to the field of 'invention' does not somehow transform or otherwise change the character of the abstract idea."). Because Claim 42 "merely recite[s] activities performed by humans, and generalized steps to be performed on a computer using conventional computer activity," *id.* (quotation omitted), it is drawn to an abstract idea at step one of *Alice*.

b. *Alice* Step Two: Inventive Concept

At the second step of the *Alice* inquiry, the Court "consider[s] the elements" of Claim 42 "both individually and as an ordered combination to determine whether the additional elements transform the nature of the claim into a patent eligible application." *Alice*, 573 U.S. at 217 (quotation omitted). "The second step of the *Alice* test is satisfied when the claim limitations involve more than performance of well understood, routine, and conventional activities previously known to the industry." *Berkheimer*, 881 F.3d at 1367 (quotation omitted).

Claim 42 does not meet this standard. The matchmaking algorithm described in limitation f is simply a "series of mathematical calculations based on selected information and the presentation of the results." *SAP Am.*, 898 F.3d at 1163 . A user must input data about herself into the claimed device. Then, the device uses ordinary computer technology to compute the degree of match between the user and another user via a preprogrammed algorithm. Finally, the device displays a degree of compatibility. Thus, the claimed device does nothing more than "collect[] information, analyz[e] it, and display[] certain results of the collection and analysis[.]" *Id.* at 1167 .5 And the specification further clarifies that "the invention can be implemented using software," so the computer components recited in limitations a-e and g are not integral to its function. Patent 479 at 17. As at *Alice* step one, this is insufficient at *Alice* step two.

Ghaly's arguments to the contrary are unpersuasive. Ghaly argues that three features of limitation f—"using processed data," calculating a "degree of compatibility, " and basing the compatibility determination on

"desired attributes and parameters"—renders the claim non-conventional. But all three of these attributes are about collecting and processing data from users. *SAP America* is instructive. There, the claim was for "resampled statistical methods." *SAP Am.*, 898 F.3d at 1164 . The Federal Circuit concluded that the claims in that case were "nothing but a series of mathematical calculations based on selected information and the presentation of the results[.]" *Id.* at 1163. The same is true of Claim 42.

Ghaly focuses on the fact that the invention represents the degree of compatibility between two users with color. This, Ghaly claims, means that the invention is directed to a unique display. However, it is clear from Claim 42 and the FAC that "[n]othing in the claims, understood in light of the specification, requires anything other than off-the-shelf, conventional computer, network, and display technology for gathering, sending, and presenting the **[*10]** desired information." *Elec. Power Grp.*, 830 F.3d at 1355 . The limitations in Claim 42 list generic computing components, and the FAC describes a generic iPhone as its example of an infringing device. In *Electric Power Group*, the Federal Circuit reasoned that a "claim requirement of 'displaying concurrent visualization' of two or more types of information" was insufficient for the claim to be directed to a patentable subject matter because "nothing in the patent contains any suggestion that the displays needed for that purpose are anything but readily available." *Id.* The same is true here.6

Moreover, the specification notes that the flow charts explaining how the invention is supposed to work are examples of "how to implement the *new* general concept of matching the personality profiles and other personal data pertaining to two individual players." Patent 479 at 21 (emphasis added). This passage highlights that the inventor understood the claimed device to be unconventional because it employed the "general concept of matching the personality profiles and other personal data pertaining to two individual players. *Id.* Reading Claim 42 in light of the specification, it is clear Claim 42 was directed toward an "improved interface" but rather as toward the concept of matching people based on personality profiles.

Ghaly points to language in the specification that "the results of the Match will be rounded to the closest

integer from 0 to 10, and for each of said integers a color, a sound effect and/or a melody are stored in [read only memory ("ROM")]." Patent 479 at 20. However, this is not a sufficiently inventive concept to make the patent eligible at *Alice* step two. The specification language pointed to by Ghaly itself undercuts its argument that the interface described in the device was not well understood, routine, or conventional. The specification states that the "the display process is a *mere* selection of a color, a sound effect and/or melody stored in ROM[.]" *Id.* (emphasis added). The use of "mere" suggests the selection of a color, sound effect, or melody did not represent an unconventional concept.

Moreover, Ghaly's argument about the "unique interface" of the claimed device rests on the premise that converting numbers, which correspond to how well suited a pair of individuals or for one another, into colors or sounds is an inventive concept. In the specification, the patent clarifies that each light and sound combination "corresponds" to an integer from 0 through ten, "with '10' being the perfect matching score or 'Red Hot' and '0' being the lowest matching score or 'Ice Cold Blue.'" Patent 479 at 20. Transforming a spectrum of numbers into a spectrum of colors is not sufficiently inventive to meet the requirement for an inventive concept at *Alice* step two.7 Accordingly, because Claim 42 is drawn to a patent-ineligible subject matter, Humor's motion to dismiss is granted. The Court denies Ghaly leave to replead because any amendment would be futile. *See Advanced Magnetics, Inc. v. Bayfront Partners, Inc.*, 106 F.3d 11 , 18 , *36 F. 1458* (2d Cir. 1997) (noting that leave to amend need not be granted where the proposed amendment [*11] would be futile).

B. Direct Infringement

1. Legal Standard

"A determination of patent infringement consists of two steps: (1) the court must first interpret the claim, and (2) it must then compare the properly construed claims to the allegedly infringing device." *SafeTCare Mfg., Inc. v. Tele-Made, Inc.*, 497 F.3d 1262 , 1268 (Fed. Cir. 2007) (quotation omitted). The first issue—construing the patent—"is a question of law" while the second question—whether infringement occurred—"is a question of fact[.]" *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 , 384 , 116 S. Ct. 1384 , 134 L. Ed. 2d 577 (1996).

"When construing a claim, a court should look first to the intrinsic evidence, *i.e.*, the claims themselves, the written description portion of the specification, and the prosecution history." *Bell & Howell Document Mgmt. Prods. Co. v. Altek Sys.*, 132 F.3d 701 , 705 (Fed. Cir. 1997) (citation omitted). "When the intrinsic evidence is unambiguous, it is improper for the court to rely on extrinsic evidence[.]" *Id.* at 706 ; *cf. TNS Media Research, LLC v. Tivo Research & Analytics, Inc.*, 166 F. Supp. 3d 432 , 446 , *vacated on reconsideration on other grounds*, 223 F. Supp. 3d 168 (S.D.N.Y. 2016) ("[L]ike summary judgment on a claim of breach of an unambiguous contract, this Court's determination of patent-eligibility requires no extraneous information, no factual record—only the patents themselves."). "In construing claims, district courts give claims their ordinary and customary meaning, which is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Cont'l Circuits LLC v. Intel Corp.*, 915 F.3d 788 , 796 (Fed. Cir. 2019) (quotation omitted).

At the pleading stage, before the Court has engaged in claim construction, the claims must be afforded "their broadest possible construction[.]" *In re Bill of Lading Transmission & Processing Sys. Patent Litig.*, 681 F.3d 1323 , 1343 n.13 (Fed. Cir. 2012). However, "[i]f even one limitation is missing or not met as claimed, there is no literal infringement." *Mas-Hamilton Grp. v. LaGard, Inc.*, 156 F.3d 1206 , 1211 (Fed. Cir. 1998).

2. Application

At the first stage of the infringement analysis, the Court must construe Claim 42. The parties only disagree as to the interpretation of limitation f. The text of limitation f is unambiguous. Limitation f requires

[a] device for determining degree of compatibility between a first set of data corresponding to a first person and a second set of data corresponding to a second person comprising . . . a control program to produce [a] user's personality attributes, or behavioral pattern parameters, using a personality profile system to process stored user's data and to match stored and processed data with data corresponding to a second user and received from another device, and to calculate a degree of compatibility between the two users based in part on the

number of common items between desired and calculated attributes or parameters.

Claim 42, limitation f. Thus, the control program must (1) "produce [a] user's personality attributes or behavioral pattern parameters using a personality profile system to process stored user's data," (2) "match stored and processed data," and (3) "calculate a degree of compatibility between" two users." *Id.* 8 And, because the claimed device must be comprised [*12] of the control program, the device itself must perform these 3 functions.

At the second stage of the infringement analysis, the Court must compare the construed claims to the allegedly infringing device. In the amended complaint, Ghaly alleges that

the OKCupid mobile application executes on a device that includes a control program (*e.g.*, functionality of the OKCupid mobile application) to produce user's personality attributes, or behavioral pattern parameters (*e.g.*, calculates, determines, renders, displays and/or presents at least what the user has indicated that he or she believes is an acceptable answer to a question), using a personality profile system (*e.g.*, OKCupid server application and related functionality) to process stored user's data (*e.g.*, process a user's answers into a weighted score), and to match stored and processed data with data corresponding to a second user (*e.g.*, the second user's answers that he or she will accept) and received from another device (*e.g.*, another smart phone, the OKCupid server application), and to calculate a degree of compatibility between the two users, based in part on the number of common items between desired and calculated attributes or parameters.

FAC ¶ 68. This is sufficient to meet the pleading standard for direct infringement for limitation f. Ghaly also plausibly alleges that the Device infringes the other limitations of Claim 42. *See* FAC ¶¶ 53-75. Hence, Ghaly plausibly alleges direct infringement.

Humor's arguments to the contrary are unavailing. Humor's primary argument is that "to infringe, a device must have a 'control program' that 'calculates a degree of compatibility between the two users'" and that "in its

Amended Complaint Ghaly Devices alleges that a 'personality profile system' located at the 'OkCupid server' performs this calculation." Mem. at 24 (citing FAC ¶ 68). The Court agrees that a device must have a control program that uses a personality profile system to calculate a degree of compatibility between two users to infringe and that the FAC alleges that the infringing personality profile system may be located on OkCupid's server. *See* FAC ¶ 68 ("using a personality profile system (*e.g.*, OKCupid server application and related functionality)). However, the FAC does not allege that the personality profile system performs the compatibility calculation. The FAC alleges that "the OKCupid mobile application executes on a device that includes a control program . . . to calculate a degree of compatibility between the two users, based in part on the number of common items between desired and calculated attributes or parameters." *Id.* Consequently, Humor's argument is unpersuasive on this ground.

Humor also argues that Ghaly's allegation of infringement contradicts the 479 Patent because, according to Humor's interpretation of the claim and the patent, the personality profile system must reside on the device rather than on the server. This is a premature attempt to solicit the Court to engage in claim construction. While it is true that the specification does not use the word "server," [*13] there is nothing in the language of the claim, the specification, or the prosecution history that requires the personality profile system that is used by the control program to reside on the device. Thus, affording claim 42 its "broadest possible construction" at the pleading stage, Ghaly has adequately alleged infringement. *In re Bill of Lading*, 681 F.3d at 1343 n.13 . Accordingly, because Ghaly has plausibly alleged direct infringement, the Court denies Humor's motion to dismiss on this ground.

IV. CONCLUSION

Although Ghaly has plausibly alleged direct infringement, the 479 Patent is drawn to a patent-ineligible subject matter under Section 101 . Consequently, Humor's motion to dismiss is GRANTED.

Because there are no remaining claims in this case, the Clerk of Court is directed to terminate all pending motions, adjourn all remaining dates, and to close this case.

SO ORDERED.

Dated: March 6, 2020

New York, New York

/s/ Gregory H. Woods

GREGORY H. WOODS

United States District Judge

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fn 1

The facts are drawn from the First Amended Complaint ("FAC"), Dkt No. 43, and are accepted as true for the purposes of this motion to dismiss. *See, e.g., Chambers v. Time Warner, Inc.*, 282 F.3d 147 , 152 (2d Cir. 2002). However, "[t]he tenet that a court must accept as true all of the allegations contained in a complaint is inapplicable to legal conclusions." *Ashcroft v. Iqbal*, 556 U.S. 662 , 678 , 129 S. Ct. 1937 , 173 L. Ed. 2d 868 (2009).

fn 2

A "personality profile system" is a system to "ascertain behavioral patterns." 479 Patent at 20. The patent specification lists as an example a system developed by the "Carlson Learning Company" and states that it "ha[s] been used for self assessment and team building." *Id.* An inventor declaration (the "Declaration") that is attached to the FAC and is part of the patent prosecution history provides the Myers-Briggs indicator as another example of a personality profile system. Affidavit of Nabil N. Ghaly Under CFR 1.132 In Support of Response to Final Rejection, Ex. B to FAC, Dkt No. 43-2, ¶ 12; *see also id.* at 12-51 (providing examples of personality profile systems).

fn 3

In its opposition, Ghaly objects to the use of the 479 Patent specification in interpreting Claim 42. Opp. at 13. However, "the 'directed to' inquiry applies a stage-one filter to claims, *considered in light of the specification*, based on whether 'their character as a whole is directed to excluded subject matter.'" *Enfish*, 822 F.3d at 1335 (emphasis added) (quoting

Internet Patents Corp. v. Active Network, Inc., 790 F.3d 1343 , 1346 (Fed. Cir. 2015)). Therefore, it is appropriate for the Court to consider the specification in interpreting the claim.

fn 4

Limitation g of Claim 42 recites that "a liquid crystal display, or light emitting diodes display" must "indicate" the "degree of compatibility between . . . two users." Claim 42, limitation g. The plain text of Claim 42 is thus inconsistent with the specification's claim that the result of the matching algorithm can be displayed via a sound effect or a melody; the degree of compatibility must be represented on an LCD or LEED display.

fn 5

In the FAC, Ghaly cites several patents that were granted by the United States Patent and Trademark Office ("USPTO") that patented matchmaking systems. FAC ¶¶ 34-39. However, these patents were granted before the Supreme Court issued its decision in *Alice* and recent Federal Circuit cases interpreting *Alice*. Hence, the Court does not find the fact that the USPTO granted these patents to be persuasive.

fn 6

Ghaly claims that Claim 42 is non-conventional because it analyzes "desired and calculated attributes . . . unlike conventional techniques of finding compatibility based [on] identifying identical personalities." Opp. at 6. But the proposition that two people may be well matched even though they do not have "identical personalities" is well understood. There is a reason, after all, that "opposites attract" is a time-worn adage, and there are numerous examples in popular culture of successful matches between individuals with different personality types. *See, e.g., When Harry Met Sally . . .* (1989) (cataloging an ultimately successful romantic relationship between two people with different personality types). The Declaration also confirms this conclusion by discussing "Opposite Systems" from the "field of Psychology," which predict that individuals will "fall in love [or befriend] an individual with [an] opposite personality." Declaration ¶ 32 (first

alteration in original).

fn 7

Ghaly's attempt to analogize this case to *Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.* is unpersuasive. [841 F.3d 1288](#) (Fed. Cir. 2016). In *Amdocs*, the Federal Circuit found that a patent had an inventive concept sufficient to pass *Alice* steps one and two because although the claim recited "arguably generic components," it "arrayed" these components "in a distributed architecture." *Id.* at 1291, 1300 . There is no element of Claim 42 that is comparable to the "distributed architecture" element in *Amdocs*, and *Amdocs* is therefore distinguishable.

fn 8

In its opposition, Ghaly urges that the Court interpret the patent such that the control program "uses the personality profile system to perform three operations: (1) to process, (2) to match, and (3) to calculate." Opp. at 26 (emphasis omitted); *see also id.* (" Limitation 42.f states: [42.f] a control program to produce user's personality attributes, or behavioral pattern parameters, using a personality profile system **(1)** to process stored user's data, and **(2)** to match stored and processed data with data corresponding to a second user and received from another device, and **(3)** to calculate a degree of compatibility between the two users, based in part on the number of common items between desired and calculated attributes or parameters[.]") (emphasis added) (emphasis in original omitted). This interpretation is not persuasive. The placement of the commas and the use of the word "and" before "to match" and "to calculate" shows that to produce, to match, and to calculate are meant to be understood as part of a tripartite list. It also makes sense to interpret the clause "using a personality profile system" to apply only to the device's production of a user's personality attributes because a personality profile system is a series of questions designed to map a user's personality. *See* [479](#) Patent at 20; Declaration at 12-51. Hence, after a user inputs her answers to a series of questions, the control program must use the personality profile system to process that data into a format that permits the user's data to be matched with another user. Accordingly, the Court adopts the interpretation of limitation f described above.

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General Information

Judge(s)	Gregory Howard Woods III
Related Docket(s)	1:19-cv-02318 (S.D.N.Y.);
Topic(s)	Civil Procedure; Patent Law; Technology Law
Industries	Computer Software
Parties	GHALY DEVICES LLC, Plaintiff, -against- HUMOR RAINBOW, INC., Defendant.
Court	United States District Court for the Southern District of New York

Ghaly Devices LLC v. Humor Rainbow, Inc., 2020 U.S.P.Q.2d 10140 (S.D.N.Y. 2020), Court Opinion

Direct History

1   **Ghaly Devices LLC v. Humor Rainbow, Inc., 2020 U.S.P.Q.2d 10140 (S.D.N.Y. 2020)**
motion to dismiss granted

Direct History Summary	
Caution	0
Negative	0
Total	0

Case Analysis

No Treatments Found

Case Analysis Summary	
Positive	0
Distinguished	0
Caution	0
Superseded	0
Negative	0
Total	0